



Neurotrophin-4, human recombinant (rHuNT-4)

Catalog No: 97228
Lot No: XXXXX
Source: *E. coli*
Synonyms: NT4, NT5, NTF5, NT-4/5, NTF4, Neurotrophin-4, Neutrophic factor 4, Neurotrophin-5, NT-5

Background

NT-4 is part of the family of neurotrophic factors, neurotrophins, that are in charge for the survival and differentiation of mammalian neurons. NT-4 expression is dominant and less influenced by environmental signals. NT-4 deficient mice shows slight cellular deficits and develop normally to adulthood. NT-4 is a target-derived survival factor for peripheral sensory sympathetic neurons. NT-4 is involved in the proliferation and differentiation of periodontal ligament cells.

Description

Neurotrophin-4 human recombinant produced in *E. coli* is a noncovalently linked homodimer, non-glycosylated polypeptide chain containing 2 x 130 amino acids (81-210 amino acids) and having a total molecular mass of 28 kDa. NT-4 is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

Lyophilized from a concentrated (1 mg/ml) solution in water containing 20 mM phosphate buffer pH 7.4 and 150 mM NaCl.

Solubility

It is recommended to reconstitute the lyophilized NT-4 in sterile 18 M Ω -cm H₂O not less than 100 μ g/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized NT-4, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution NT-4 should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Purity

Greater than 97.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

Amino Acid Sequence

GVSETAPASR RGE LAVCD AV SGWVTDRRTA VDLRGREVEV LGEVPAAGGS PLRQYFFETR CKADNAEEGG PGAGGGGCRG
VDRRHVVSEC KAKQSYVRAL TADAQGRVGV RWIRIDTACV CTLLSRTGRA

Activity

Determined by the dose-dependent induction of choline acetyl transferase activity in rat basal forebrain primary septal cell cultures was found to be in the range of 20 - 50 ng/ml.

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